What is claimed is:

1. A method, comprising:

acquiring a signal under test (SUT) at each of at least two sample rates to provide thereby respective streams of samples;

processing the respective streams of samples according to a first function to determine thereby respective spectral energy distributions; and

comparing the respective spectral energy distributions to determine a spectral region including spectral energy common to each.

2. The method of claim 1 wherein the SUT is alternately acquired at each of the sample rates.

3. The method of claim 1 wherein the SUT is simultaneously acquired at each of the sample rates.

4. The method of claim 1 wherein the comparing step comprises the step of processing the respective spectral energy distributions associated with each of a plurality of corresponding spectral regions to attenuate non-common spectral energy components.

5. The method of claim 4 wherein respective spectral energy distributions processing step comprises the step of using at least one of a smoothing function and a minimizing function.

6. The method of claim 1 further comprising the step of presenting on a display device the spectral region of the respective spectral energy distributions having common spectral energy components.

7. The method of claim 6 wherein the common spectral energy components of the spectral region are presented in one color and non-common spectral energy components are presented in another color.

8. The method of claim 6 wherein the common spectral energy components of the spectral region are presented in one intensity level and non-common spectral energy components are presented in another intensity level.

9. The method of claim 1 wherein the comparing step comprises the step of comparing at least two of the respective spectral energy distributions when there are more than two sample rates to determine thereby the spectral region common to each of the at least two respective spectral energy distributions.

10. The method of claim 1 wherein the first function comprises a function selected from the group of functions consisting of at least a Fast Fourier transform (FFT) function, a wavelet function, a chirp function and a discrete Fourier transform (DFT).

11. The method of claim 1 wherein the sample rates are selected to cause aliased signal spectral energy to be distributed in a spectrally non-common manner.

12. The method of claim 1 further comprising the step of adapting the sample rates in response to user interaction, the user interaction including at least one of a sample rate selection input, a record length selection input, a frequency band selection input, a frequency resolution input, a center frequency selection input and an update rate.

13. An apparatus comprising:

an input channel for acquiring a signal under test (SUT) at a plurality of sample rates to provide thereby respective streams of samples; and

a processor for processing the respective streams of samples according to a first function to determine thereby respective spectral energy distributions, and for comparing the spectral energy distributions to determine thereby a spectral region including spectral energy common to each of the respective spectral energy distributions.

14. The apparatus of claim 13 wherein the SUT is alternately acquired at each sample rate.

15. The apparatus of claim 13 wherein the SUT is simultaneously acquired at each sample rate.

16. The apparatus of claim 13 further comprising a display processor for generating an output signal for presentation on a display device an image representative of the spectral region of the respective spectral energy distributions having common spectral energy components.

17. The apparatus of claim 16 wherein the common spectral energy components are presented in one color and non-common spectral energy components are presented in another color.

18. The apparatus of claim 16 wherein the common spectral energy components are presented in one intensity level and non-common spectral energy components are presented in another intensity level.

19. The apparatus of claim 16 wherein spectral energy from each acquisition of the SUT is displayed in a different color, and wherein common areas of spectral energy are visible in yet another color.